

WHAT IS CLAIMED IS:

1. An image binarization method, wherein

as a first processing, multi-digitized luminance data obtained by digitally converted video signals from an imaging device for each pixel on each horizontal scanning line is stored in an even-numbered row horizontal line memory if the current horizontal scanning line is an even-numbered row, and is stored in an odd-numbered row horizontal line memory if the horizontal scanning line is an odd-numbered row, and in said multi-digitized luminance data on the current scanning line, detected maximum value MAX_i and minimum value MIN_j exceeding a predetermined displacement level, and addresses $MAXP_i$ and $MINP_j$ at the detected pixel positions are stored in an even-numbered detection memory if the current horizontal scanning line is an even-numbered row, or in an odd-numbered row detection memory if the current horizontal scanning line is an odd-numbered row; and

as a second processing, reading-out is carried out from the even-numbered detection memory if the current horizontal scanning line is an odd-numbered row, or from the odd-numbered detection memory if the current horizontal scanning line is an even-numbered row, and based on floating thresholds $FT_h = MIN_j + (MAX_i - MIN_j) \times K$ (herein, K is an emphasis coefficient between 0 and 1, and h , i , and j are integers starting from

zero) for each section X_h of the horizontal pixel address row set by means of operation, the multi-digitized data read out from the even-numbered horizontal line memory in the case of the odd-numbered row or the odd-numbered horizontal line memory in the case of the even-numbered row is converted into binary data.

2. An image binarization method according to Claim 1, wherein only the first processing is carried out for the first horizontal scanning line, and only the second processing is carried out for the final horizontal scanning line.

3. A binary image creation method, wherein
as a first processing, multi-digitized luminance data obtained by digitally converting video signals from an imaging device for each pixel on each horizontal scanning line is stored in a horizontal line memory row of an image memory corresponding to the current horizontal scanning line, and detected maximum value MAX_i and minimum value MIN_j exceeding a predetermined displacement level, and addresses $MAXP_i$ and $MINP_j$ of the detected pixel positions are stored in a specific one of at least two detection memories; and

as a second processing, reading-out is carried out from the detection memory specified by the previous horizontal scanning line, and based on floating thresholds

FT_h=MIN_j+(MAX_i-MIN_j) × K (herein, K is an emphasis coefficient between 0 and 1, and h, i, and j are integers starting from zero) for each section X_h of the horizontal pixel address row set by means of operation, the multi-digitized data read out from the horizontal line memory row of the image memory corresponding to the previous horizontal scanning line is converted into binary data for each pixel and rewritten.

4. A binary image creation method according to Claim 3, wherein only the first processing is carried out for the first horizontal scanning line and only the second processing is carried out for the final horizontal scanning line.

5. An image binarization method according to Claim 1 or 2, wherein the floating threshold FT is determined by setting the emphasis coefficient K=0.5.

6. An image binarization method according to Claim 1 or 2, wherein the floating threshold FT is determined by setting the emphasis coefficient K>0.5, and white characters are effectively reflected on a black background.

7. An image binarization method according to Claim 1 or 2, wherein the floating threshold FT is determined by setting the emphasis coefficient K<0.5, and black characters are effectively reflected on a white background.

8. An image binarization method according to Claim 1 or 2,

wherein the fineness of the entirety of an image is effectively reflected by lowering the displacement level.

9. An image binarization method, wherein

as a first processing, multi-digitized luminance data obtained by digitally converting video signals from an imaging device for each pixel on each horizontal scanning line that has been stored in one horizontal line memory in the previous horizontal scanning is read-out and then stored, and in the multi-digitized luminance data on the current scanning line, detected maximum value MAX_i and minimum value MIN_j , and the addresses $MAXP_i$ and $MINP_j$ of the detected pixel positions thereof are stored in an even-numbered row detection memory if the current horizontal scanning line is an even-numbered row, or stored in an odd-numbered detection memory in the case of an odd-numbered row; and

as a second processing, data reading is carried out from the even-numbered row detection memory when the current horizontal scanning line is an odd-numbered row, or from the odd-numbered row detection memory in the case of an even-numbered row, and based on floating thresholds $FT_h = MIN_j + (MAX_i - MIN_j) \times K$ (herein, K is an emphasis coefficient between 0 and 1, and h, i , and j are integers starting from zero) for each section X_h of the horizontal pixel address row set by means of operation,

the multi-digitized data of the previous horizontal scanning read-out by the first processing is converted into binary data for each pixel.

10. An image binarization method, wherein

as a first processing, multi-digitized luminance data obtained by digitally converting video signals from an imaging device for each pixel on each horizontal scanning line is stored in a specific one of at least two horizontal line memories, and in the multi-digitized luminance data on the current scanning line, detected maximum value MAX_i and minimum value MIN_j exceeding a predetermined displacement level, and the addresses $MAXP_i$ and $MINP_j$ of the detected pixel positions are stored in a specific one of at least two detection memories; and

as a second processing, reading-out is carried out from the detection memory specified by the previous horizontal scanning line, and based on floating thresholds $FT_b = MIN_j + (MAX_i - MIN_j) \times K$ (herein, K is an emphasis coefficient between 0 and 1, and h , i , and j are integers starting from zero) for each section X_h of the horizontal pixel address row set by means of operation, multi-digitized data read-out from the previous horizontal line memory specified by the horizontal scanning line is converted into binary data for each pixel.